THE OFFICE ACTION

In the Office Action issued on February 8, 2007, the Examiner presented a number of objections/rejections.

The Examiner rejected claims 1-10 under §101 as not reciting patentable subject matter for not reciting a tangible result.

The Examiner rejected claims 1-6 and 10 under 35 U.S.C. §102(b) as being anticipated by Zuyev et al, Optimizing injection Gate Location and Cycle Time for the In-Mold Coating, ANTEC 2001 ("Zuyev").

The Examiner rejected claims 7-9 under 35 U.S.C. §103(a) as being unpatentable over Zuyev in view of Chen et al., In-Mold Functional Coating of Thermoplastic Substrates: Process Modeling, ANTEC 2001 ("Chen").

REMARKS

Amendments have been made to claims 1 and 6 to address the Examiner's rejection. Claims 1-10 remain pending in the application.

A. The §101 Rejection

With regard to the rejection of claims 1-10 as allegedly not reciting a tangible result, amendments have been made to independent claims 1 and 6 to recite steps of using the results of said methods in tangible ways. Specifically, claim 1 has been amended to recite using the results to optimize the in-mold coating process for said molded article by minimizing the cycle time for said in-mold coating process. This is a tangible result, in that the in-mold coating time is minimized using this process, reducing the time in which the in-mold coating takes place, and optimizing the coating process. Likewise, claim 6 has been amended to recite placing the coating injection nozzle in an optimal position as a result of the prediction of the fill pattern in a given mold. This also is a tangible result for the process. Withdrawal of this rejection is requested.

Claims 5 and 10 are dependent on claims 1 and 6, respectively, which are directed to methods having tangible, concrete results. They recite the method including instructions contained on computer readable medium. As dependent on proper subject matter claims, they also contain proper subject matter by definition.

B. The Claims are not Anticipated or Rendered Obvious by the Cited References

The Examiner rejected claims 1-6 and 10 under §102 based on Zuyev. Applicants would like to thank the Examiner for a well thought out analysis of the prior art and his helpful comments. Nonetheless, Applicants respectfully disagree with the Examiner and submit that the Examiner is missing the nuances of the teachings of Zuyev.

In this respect, the Examiner disagrees with the Applicants that Zuyev does not teach fitting results obtained from the theoretical kinetic model to a meta-model of the cure time as a function of an initiator level and reaction temperature. The Examiner cites page 2, col. 2, paragraph 5, lines 6-16 of Zuyev as allegedly teaching this step.

However, Applicants would like the Examiner to reread this section and would like to point out that while Zuyev does teach developing a *kinetic* model to represent the reaction rate as a function of both temperature and initiator level (lines 6-8 of that paragraph, and corresponding to step 2 of claim 1), he does not teach the step of "fitting results obtained from this theoretical kinetic model to a *metamodel* of the cure time as a function of initiator level and reaction temperature" (step 3 of claim 1). That is, Zuyev clearly teaches taking the results of the kinetic model and fitting these results to two second order metamodels, the metamodel of the cure time being "a function of the catalyst level (I_L) and the wall temperature (T_w)", NOT as a function of the initiator level (See page 2, col. 2, paragraph 6, lines 8-11). Zuyev does disclose adding more catalyst, but the Examiner will appreciate that a catalyst is completely different from an initiator in a reaction. Applicants may not have explained this distinction clearly in their prior response, but hope that they have now clearly detailed the differences between Zuyev and the present invention. Thus, Applicants respectfully request withdrawal of this rejection.

With regard to the Examiner's rejection of claims 7-9 based on Zuyev in conjunction with Chen, even assuming that Chen discloses the step of predicting a coating fill pattern in the mold by determining the relation between a pressure in the mold and a flow rate in the coating and even assuming the propriety of combining the two references, such a combination would still not disclose or suggest all the limitations of the base claim. That is, such a combination would not disclose or suggest a process including a step of fitting results obtained from a theoretical kinetic

model to a *metamodel* of the cure time as a function of an initiator level and reaction temperature. Thus, such a combination fails to render the present claims obvious. Withdrawal of this rejection is requested.

CONCLUSION

It is respectfully submitted that the subject application is now in better condition for examination.

Respectfully submitted,

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April 23, 2007
Date

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